

IN THE CLAIMS

Please amend the claims as follows:

1 (Currently Amended). An information-processing apparatus including a module which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, comprising:

a session management unit configured to manage a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management unit configured to manage a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the session management unit is configured to start the management of the session processing steps when [[a]] an express management start request is received from the client or when [[a]] an implicit request to start management of the session processing steps other than the express management start request is received.

2 (Currently Amended). An information-processing apparatus including a module which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, comprising:

a session management unit configured to manage a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an

amount based on the function that needs exclusive access control; and

a transaction management unit configured to manage a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the session management unit is configured to start the management of the session processing steps when ~~[[a]]~~ an express management start request and ~~[[a]]~~ an implicit request to start management of the session processing steps other than the express management start request are received from the client.

3 (Currently Amended). An information-processing apparatus including a module which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, comprising:

a session management unit configured to manage a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management unit configured to manage a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the session management unit is configured to end the management of the session processing steps when a management end request is received from the client or when ~~a predetermined~~ the time-out period expires.

4 (Currently Amended). An information-processing apparatus including a module

which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively updated by a client through authentication, comprising:

a session management unit configured to manage a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management unit configured to manage a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the session management unit is configured to end the management of the session processing steps when a management end request is received from the client and a ~~predetermined~~ the time-out period expires.

5 (Currently Amended). An information-processing apparatus including a module which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, comprising:

a session management unit configured to manage a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management unit configured to manage a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the transaction management unit is configured to start the management of the transaction processing steps when ~~[[a]]~~ an express management start request is received from the client or when ~~[[a]]~~ an implicit request to start management of the transaction processing steps other than the express management start request is received.

6 (Currently Amended). An information-processing apparatus including a module which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, comprising:

a session management unit configured to manage a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management unit configured to manage a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the transaction management unit is configured to start the management of the transaction processing steps when ~~[[a]]~~ an express management start request and ~~[[a]]~~ and implicit request to start management of the transaction processing steps other than the express management start request are received from the client.

7 (Currently Amended). An information-processing apparatus including a module which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, comprising:

a session management unit configured to manage a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management unit configured to manage a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the transaction management unit is configured to end the management of the transaction processing steps when a management end request is received from the client or when a ~~predetermined~~ the time-out period expires.

8 (Currently Amended). An information-processing apparatus including a module which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, comprising:

a session management unit configured to manage a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management unit configured to manage a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the transaction management unit is configured to end the management of the transaction processing steps when a management end request is received from the client and a ~~predetermined~~ the time-out period expires.

9 (Previously Presented). An information-processing apparatus according to claim 5, wherein the transaction management unit is configured to transmit, before the management of the transaction processing steps has begun, a lock request to the module so that other clients than said client are inhibited from using the function that needs exclusive access control.

10 (Previously Presented). An information-processing apparatus according to claim 7, wherein the transaction management unit is configured to transmit, after the management of the transaction processing steps has ended, an unlock request to the module so that inhibition of using the function by other clients than said client is canceled.

11 (Previously Presented). An information-processing apparatus according to claim 5, wherein the transaction management unit is configured to receive a lock type and a management start request from the client, the lock type indicating a classification of a lock request being sent to the module, and the transaction management unit is configured to transmit the lock request, indicated by the received lock type, to the module so that other clients than said client are inhibited from using the function that needs exclusive access control.

12 (Previously Presented). An information-processing apparatus according to claim 5, wherein the transaction management unit is configured to receive a lock type and a lock type change request from the client, the lock type indicating a classification of a lock request being sent to the module, and the transaction management unit is configured to transmit the lock request, indicated by the received lock type, to the module so that other clients than said client are inhibited from using the function that needs exclusive access control.

13 (Previously Presented). An information-processing apparatus according to claim 6, wherein the transaction management unit is configured to determine a classification of a lock request being sent to the module, in accordance with a kind of a function request received from the client, and the transaction management unit is configured to transmit the lock request, indicated by the determined classification, to the module so that other clients than said client are inhibited from using the function that needs exclusive access control.

14 (Previously Presented). An information-processing apparatus according to claim 6, wherein the transaction management unit transmits, before the management of the transaction processing steps is started, a lock request to the module so that other clients than said client are inhibited from using the function that needs exclusive access control.

15 (Previously Presented). An information-processing apparatus according to claim 8, wherein the transaction management unit is configured to transmit, after the management of the transaction processing steps has ended, an unlock request to the module so that inhibition of using the function by other clients than said client is canceled.

16 (Currently Amended). An information-processing method for an information-processing apparatus which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, the method comprising:

a session management step of managing a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount

based on the function that needs exclusive access control; and

a transaction management step of managing a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the session management step starts the management of the session processing steps when [[a]] an express management start request is received from the client or when [[a]] an implicit request to start management of the session processing steps other than the express management start request is received.

17 (Currently Amended). An information-processing method for an information-processing apparatus which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, the method comprising:

a session management step of managing a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management step of managing a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the session management step starts the management of the session processing steps when [[a]] an express management start request and [[a]] an implicit request to start management of the session processing steps other than the express management start request are received from the client.

18 (Currently Amended). An information-processing method for an information-processing apparatus which provides one or more clients with a function that needs exclusive



access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, the method comprising:

a session management step of managing a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management step of managing a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the session management step ends the management of the session processing steps when a management end request is received from the client or when ~~a predetermined~~ the time-out period expires.

19 (Currently Amended). An information-processing method for an information-processing apparatus which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, the method comprising:

a session management step of managing a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management step of managing a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the session management step ends the management of the session processing steps when a management end request is received from the client and ~~a predetermined~~ the time-out period expires.

20 (Currently Amended). An information-processing method for an information-processing apparatus which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, the method comprising:

a session management step of managing a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management step of managing a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the transaction management step starts the management of the transaction processing steps when [[a]] an express management start request is received from the client or when [[a]] an implicit request to start management of the transaction processing steps other than the express management start request is received.

21 (Currently Amended). An information-processing method for an information-processing apparatus which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, the method comprising:

a session management step of managing a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management step of managing a series of indivisible transaction

processing steps performed by using the function that needs exclusive access control,

wherein the transaction management step starts the management of the transaction processing steps when ~~[[a]]~~ an express management start request and ~~[[a]]~~ an implicit request to start management of the transaction processing steps other than the express management start request are received from the client.

22 (Currently Amended). An information-processing method for an information-processing apparatus which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, the method comprising:

a session management step of managing a series of session processing steps and incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management step of managing a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the transaction management step ends the management of the transaction processing steps when a management end request is received from the client or when a ~~predetermined~~ the time-out period expires.

23 (Currently Amended). An information-processing method for an information-processing apparatus which provides one or more clients with a function that needs exclusive access control in which user information stored in the information-processing apparatus is exclusively read or updated by a client through authentication, the method comprising:

a session management step of managing a series of session processing steps and

incidental information in a state where a session with a client is maintained by extending a time-out period, which indicates how long the incidental information is stored, by an amount based on the function that needs exclusive access control; and

a transaction management step of managing a series of indivisible transaction processing steps performed by using the function that needs exclusive access control,

wherein the transaction management step ends the management of the transaction processing steps when a management end request is received from the client and a ~~predetermined~~ the time-out period expires.